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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,127	10/30/2003	Hyun Woo Song	2013P115	4968
8791	7590	11/30/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN			PRENTY, MARK V	
12400 WILSHIRE BOULEVARD			ART UNIT	
SEVENTH FLOOR			PAPER NUMBER	
LOS ANGELES, CA 90025-1030			2822	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/699,127	Applicant(s) SONG ET AL.	
	Examiner MARK PRENTY	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 15-17 is/are allowed.
- 6) ☒ Claim(s) 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This Office Action is in response to the amendment filed on November 8, 2005.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,493,577 to Choquette et al. (Choquette) together with newly cited United States Patent 6,965,626 to Tatum et al. (Tatum).

With respect to independent claim 18, Choquette discloses a semiconductor optical device (see the entire patent, including the Fig. 2 disclosure) comprising: confinement-conducting regions having semiconductor layers 20 (see column 10, lines 15-18, for example, and note that "carder" should apparently read "carrier") on a "preferably gallium arsenide (GaAs)" substrate 12 (see column 5, lines 61-63), each of the confinement-conducting regions including one or more material layers (note the paragraph bridging columns 12-13); and a gain region 18 having a semiconductor layer, which is formed between the confinement-conducting regions and includes one or more material layers, wherein the confinement-conducting regions and the gain region have a mesa structure, and a lateral portion of at least one of the material layers constituting the semiconductor layers of the confinement-conducting regions and the gain region is recessed, and the recess is partially or wholly filled with an oxide layer, a nitride layer or a combination of them (i.e., layers 20 have oxidized portions, which is structurally tantamount to their having recesses wholly filled with an oxide layer).

The difference, therefore, between claim 18 and Choquette is their substrates comprise InP (indium phosphide) and "preferably gallium arsenide (GaAs)," respectively. Note that Choquette's optical device can be a vertical-cavity surface-emitting laser (VCSEL) (see the Abstract, for example).

Tatum teaches that a VCSEL is conventionally formed on either a GaAs or InP substrate (see column 3, lines 63-66).

It would have been obvious to one skilled in the art to form Choquette's VCSEL substrate of InP rather than GaAs because Tatum teaches that a VCSEL is conventionally formed on either an InP or GaAs substrate.

Claim 18 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Choquette together with Tatum.

Claims 1-13 and 15-17 are allowable over the prior art of record.

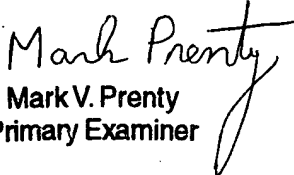
Applicant's argument with respect to newly presented claim 18 is moot in view of the new ground of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2822

Registered practitioners can telephone the examiner at (571) 272-1843. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the Application/Control (Serial) Number. Technology Center 2800's general telephone number is (571) 272-2800.


Mark V. Prenty
Primary Examiner